

**Abstract**

A method of estimating the location of a wireless terminal without the addition of hardware to either the wireless terminal or to the telecommunication system's base stations is disclosed. The illustrative embodiment of the present invention is based on the observation that the signal strength of a signal from a transmitter is different at some locations, and, therefore, the location of a wireless terminal can be estimated by comparing the signal strength it currently observes against a map or database that correlates locations to signal strengths. Furthermore, the illustrative embodiment deduces the signal strength of the serving base station's control channel signal at the wireless terminal,  $R_D$ , based on the principal of reciprocity.